APPENDIX A
DEFINITIONS

BEST TRACK - A subjectively smoothed path, versus a precise and very erratic fix-to-fix path, used to represent tropical cyclone movement, and based on an assessment of all available data.

CENTER - The vertical axis or core of a tropical cyclone. Usually determined by cloud vorticity patterns, wind and/or pressure distribution.

EPHEMERIS - Position of a body (satellite) in space as a function of time; used for gridding satellite imagery. Since ephemeris gridding is based solely on the predicted position of the satellite, it is susceptible to errors from vehicle wobble, orbital eccentricity, the oblateness of the Earth, and variation in vehicle speed.

EXPLOSIVE DEEPENING - A decrease in the minimum sea-level pressure of a tropical cyclone of 2.5 mb/hr for at least 12 hours or 5.0 mb/hr for at least six hours (Dunnavan, 1981).

EXTRATROPICAL - A term used in warnings and tropical summaries to indicate that a cyclone has lost its "tropical" characteristics. The term implies both poleward displacement from the tropics and the conversion of the cyclone's primary energy source from the release of latent heat of condensation to baroclinic processes. It is important to note that cyclones can become extratropical and still maintain winds of typhoon or storm force.

EYE - The central area of a tropical cyclone when it is more than half surrounded by wall cloud.

FUJIWHARA EFFECT - A binary interaction where tropical cyclones within about 750 nm (1390 km) of each other begin to rotate about a common midpoint (Brand, 1970; Dong and Neumann, 1983).

INTENSITY - The maximum sustained 1-minute mean surface wind speed, typically within one degree of the center of a tropical cyclone.

MAXIMUM SUSTAINED WIND - The highest surface wind speed averaged over a 1-minute period of time. (Peak gusts over water average 20 to 25 percent higher than sustained winds.)

MONSOON DEPRESSION - a tropical cyclonic vortex characterized by: 1) its large size, the outermost closed isobar may have a diameter on the order of 600 nm (1000 km); 2) a loosely organized cluster of deep convective elements; 3) a low-level wind distribution which features a 100-nm (200-km) diameter light-wind core which may be partially surrounded by a band of gales; and, 4) a lack of a distinct cloud system center. Note: most monsoon depressions which form in the western North Pacific eventually acquire persistent central convection and accelerated core winds marking its transition into a conventional tropical cyclone.

MONSOON GYRE - a mode of the summer monsoon circulation of the western North Pacific characterized by: 1) a large nearly circular low-level cyclonic vortex that has an outer most closed isobar with diameter on the order of 1200 nm (2500 km); 2) a cloud band rimming the southern through eastern periphery of the vortex/surface low; 3) a relatively long (two week) life span - initially, a subsident regime exists in its core and western and northwestern quadrants with light winds and scattered low cumulus clouds; later, the area within the outer closed isobar may fill with deep convective cloud and become a monsoon depression or

tropical cyclone; and, 4) the large vortex cannot be the result of the expanding wind field of a preexisting monsoon depression or tropical cyclone. Note: a series of small or midget tropical cyclones may emerge from the "head" or leading edge of the peripheral cloud band of a monsoon gyre (Lander, 1993).

RAPID DEEPENING - A decrease in the minimum sea-level pressure of a tropical cyclone of 1.75 mb/hr or 42 mb for 24-hours (Holliday and Thompson, 1979).

RECURVATURE - The turning of a tropical cyclone from an initial path toward the west and poleward to east and poleward, after moving poleward of the mid-tropospheric subtropical ridge axis.

SIGNIFICANT TROPICAL CYCLONE - A tropical cyclone becomes "significant" with the issuance of the first numbered warning by the responsible warning agency.

SIZE - The areal extent of a tropical cyclone, usually measured radially outward from the center to the outer-most closed isobar.

STRENGTH - The average wind speed of the surrounding low-level wind flow, usually measured within one to three degrees of the center of a tropical cyclone (Weatherford and Gray, 1985).

SUBTROPICAL CYCLONE - A low pressure system that forms over the ocean in the subtropics and has some characteristics of a tropical circulation, but not a central dense overcast. Although of upper cold low or low-level baroclinic origins, the system can transition to a tropical cyclone.

SUPER TYPHOON - A typhoon with maximum sustained 1-minute mean surface winds of 130 kt (67 m/sec) or greater.

TROPICAL CYCLONE - A non-frontal, migratory low-pressure system, usually of synoptic scale, originating over tropical or subtropical waters and having a definite organized circulation.

TROPICAL DEPRESSION - A tropical cyclone with maximum sustained 1-minute mean surface winds of 33 kt (17 m/sec) or less.

TROPICAL DISTURBANCE - A discrete system of apparently organized convection, generally 100 to 300 nm (185 to 555 km) in diameter, originating in the tropics or subtropics, having a non-frontal, migratory character and having maintained its identity for 12- to 24-hours. It may or may not be associated with a detectable perturbation of the low-level wind or pressure field. It is the basic generic designation which, in successive stages of development, may be classified as a tropical depression, tropical storm, typhoon or super typhoon.

TROPICAL STORM - A tropical cyclone with maximum 1-minute mean sustained surface winds in the range of 34 to 63 kt (17 to 32 m/sec), inclusive.

TROPICAL UPPER-TROPOSPHERIC TROUGH (TUTT) - A dominant climatological system and a daily upper-level synoptic feature of the summer season, over the tropical North Atlantic, North Pacific and South Pacific Oceans (Sadler, 1979).

TYPHOON (HURRICANE) - A tropical cyclone with maximum sustained 1-minute mean surface winds of 64 to 129 kt (33 to 66 m/sec). West of 180 degrees east longitude they are called typhoons and east of 180 degrees east longitude hurricanes.

WALL CLOUD - An organized band of deep cumuliform clouds that immediately surrounds the central area of a tropical cyclone. The wall cloud may entirely enclose or partially surround the center.

APPENDIX B

NAMES FOR TROPICAL CYCLONES IN THE WESTERN NORTH PACIFIC AND SOUTH CHINA SEA

Column 1		Column 2		Column 3		Column 4	
ANGELA	AN-gel-ah	**ABE**	ABE	**AMY**	A-mee	**AXEL**	AX-ell
BRIAN	BRY-an	**BECKY**	BECK-ee	**BRENDAN**	BREN-dan	**BOBBIE**	BOB-ee
COLLEEN	COL-leen	**CECIL**	CEE-cil	**CAITLIN**	KATE-lin	**CHUCK**	CHUCK
DAN	DAN	**DOT**	DOT	**DOUG**	DUG	**DEANNA**	dee-AN-na
ELSIE	ELL-see	**ED**	ED	**ELLIE**	ELL-ee	**ELI**	EE-lye
FORREST	FOR-rest	**FLO**	FLO	**FRED**	FRED	**FAYE**	FAY
GAY	GAY	**GENE**	GEEN	**GLADYS**	GLAD-iss	**GARY**	GAR-ee
HUNT	HUNT	**HATTIE**	HAT-ee	**HARRY**	HAR-ee	**HELEN**	HELL-en
IRMA	IR-ma	**IRA**	EYE-ra	**IVY**	EYE-vee	**IRVING**	ER-ving
JACK	JACK	**JEANA**	JEAN-ah	**JOEL**	JOLE	**JANIS**	JAN-iss
KORYN	ko-RIN	**KYLE**	KYE-ell	**KINNA**	KIN-na	**KENT**	KENT
LEWIS	LOU-iss	**LOLA**	LOW-lah	**LUKE**	LUKE	**LOIS**	LOW-iss
MARIAN	MAH-rian	**MANNY***	MAN-ee	**MELISSA***	meh-LISS-ah	**MARK**	MARK
NATHAN	NAY-than	**NELL**	NELL	**NAT**	NAT	**NINA**	NEE-nah
OFELIA	oh-FEEL-ya	**OWEN**	OH-en	**ORCHID**	OR-kid	**OSCAR***	OS-car
PERCY	PURR-see	**PAGE**	PAGE	**PAT**	PAT	**POLLY**	PA-lee
ROBYN	ROB-in	**RUSS**	RUSS	**RUTH**	RUTH	**RYAN**	RYE-an
STEVE	STEEV	**SHARON**	SHAR-on	**SETH**	SETH	**SIBYL**	SIB-ill
TASHA	TA-sha	**TIM**	TIM	**TERESA***	teh-REE-sah	**TED**	TED
VERNON	VER-non	**VANESSA**	vah-NES-ah	**VERNE**	VERN	**VAL**	VAL
WINONA	wi-NO-nah	**WALT**	WALT	**WILDA**	WILL-dah	**WARD**	WARD
YANCY	YAN-see	**YUNYA**	YUNE-yah	**YURI**	YOUR-ee	**YVETTE**	ee-VET
ZOLA	ZO-lah	**ZEKE**	ZEEK	**ZELDA**	ZELL-dah	**ZACK**	ZACK

* Name changes: MANNY replaced MIKE in 1991; MELISSA replaced MIREILLE, TERESA replaced THELMA in 1992, and OSCAR replaced OMAR in 1993.

NOTE 1: Names are assigned in rotation and alphabetically. When the last name in Column 4 (ZACK) has been used, the sequence will begin again with the first name in Column 1 (ANGELA).

NOTE 2: Pronunciation guide for names are italicized.

SOURCE: CINCPACINST 3140.1V

APPENDIX C
CONTRACTIONS

A-track	Along-track
AB	Air Base
ABW	Air Base Wing
ABIO	Significant Tropical Weather Advisory for the Indian Ocean
ABPW	Significant Tropical Weather Advisory for the Western Pacific Ocean
ACCS	Air Control Center Squadron
ACFT	Aircraft
ADP	Automated Data Processing
AFB	Air Force Base
AFGWC	Air Force Global Weather Central
AFTN	Airfield Fixed Telecommunication Network
AIREP	Aircraft (Weather) Report
AJTWC	Alternate Joint Typhoon Warning Center
AMOS	Automatic Meteorological Observing Station
AOR	Area of Responsibility
APT	Automatic Picture Transmission
ARC	Automated Remote Collection
ARGOS	International Service for Drifting Buoys
ATCF	Automated Tropical Cyclone Forecast (System)
AUTODIN	Automated Digital Network
AWDS	Automated Weather Distribution System
AWN	Automated Weather Network
CCWF	Combined Confidence Weighted Forecast
CDO	Central Dense Overcast
CEC	Circular Exhaust Cloud
CI	Current Intensity
CINCPAC	Commander-in-Chief Pacific (AF - Air Force, FLT - Fleet)
CIV	Civilian
CLD	Cloud
CLIM	Climatology
CLIP or CLIPER	Climatology and Persistence Technique
CM	Centimeter(s)
C-MAN	Coastal-Marine Automated Network
CNOC	Commander Naval Oceanography Command
CPA	Closest Point of Approach
CPHC	Central Pacific Hurricane Center
CSC	Cloud System Center
CSUM	Colorado State University Model
DDN	Defense Data Network
DEG	Degree(s)
DET	Detachment
DFS	Digital Facsimile System
DMSP	Defense Meteorological Satellite Program
DOD	Department of Defense
DSN	Defense Switched Network
DTG	Date Time Group
EGGR	Bracknell Model
FBAM	FNOC Beta Advection Model
FI	Forecast Intensity (Dvorak)
FNOC	Fleet Numerical Oceanography Center
FT	Feet
GMT	Greenwich Mean Time
GOES	Geostationary Operational Environmental Satellite
GTS	Global Telecommunications System

HPAC	Mean of XTRP and CLIM Techniques (Half Persistence and Climatology)
HF	High Frequency
HR	Hour(s)
HRPT	High Resolution Picture Transmission
ICAO	International Civil Aviation Organization
INIT	Initial
INST	Instruction
IR	Infrared
JTWC	Joint Typhoon Warning Center
JTWC92 or JT92	Statistical-dynamical Objective Technique
JTYM	Japanese Typhoon Model
KM	Kilometer(s)
KT	Knot(s)
LAN	Local Area Network
LAT	Latitude
LLCC	Low-Level Circulation Center
LONG	Longitude
LUT	Local User Terminal
LVL	Level
M	Meter(s)
MAX	Maximum
MB	Millibar(s)
MBAM	Medium Beta and Advection Model
MCAS	Marine Corps Air Station
MET	Meteorological
MIDDAS	Meteorological Imagery, Data Display, and Analysis System
MIN	Minimum
MINI-MET	Mini-Meteorological
MISTIC	Mission Sensor Tactical Imaging Computer
MM	Millimeter(s)
MOVG	Moving
MSLP	Minimum Sea-level Pressure
NARDAC	Naval Regional Data Automation Center
NAS	Naval Air Station
NASA	National Aeronautics and Space Administration
NAVOCEANCOM	Naval Oceanography Command
NEDN	Naval Environmental Data Network
NEDS	Naval Environmental Display Station
NESDIS	National Environmental Satellite, Data, and Information Service
NESN	Naval Environmental Satellite Network
NEXRAD	Next Generation Weather (Doppler) Radar
NHC	National Hurricane Center
NM	Nautical Mile(s)
NMC	National Meteorological Center
NOAA	National Oceanic and Atmospheric Administration
NOCC	Naval Oceanography Command Center
NODDES	Naval Environmental Data Network Oceanographic Data Distribution and Expansion System
NODDS	Navy/NOAA Oceanographic Data Distribution System
NOGAPS or NGPS	Navy Operational Global Atmospheric Prediction System
NR	Number
NRL	Naval Research Laboratory
NRPS or NORAPS	Navy Operational Regional Atmospheric Prediction System
NSDS	Naval Satellite Display System
NSDS-G	Naval Satellite Display System - Geostationary
NSS	Northward-displaced, Self-sustaining, Solitary (monsoon gyre)
NTCC	Naval Telecommunications Center

NWOC	Naval Western Oceanography Center
NWP	NorthWest Pacific
NWS	National Weather Service
OBS	Observations
OLS	Operational Linescan System
ONR	Office of Naval Research
OSS	Operations Support Squadron
OTCM	One-Way (Interactive) Tropical Cyclone Model
PACAF	Pacific Air Force
PACMEDS	Pacific Meteorological Data System
PACOM	Pacific Command
PCN	Position Code Number
PDN	Public Data Network
PIREP	Pilot Weather Report(s)
RADOB	Radar Observation
RECON	Reconnaissance
RRDB	Reference Roster Data Base
RRT	Rapid Response Team
RSDB	Raw Satellite Data Base
SAT	Satellite
SEC	Second
SDHS	Satellite Data Handling System
SFC	Surface
SGDB	Satellite Global Data Base
SLP	Sea-Level Pressure
SPAWRSYSCOM	Space and Naval Warfare Systems Command
SSM/I	Special Sensor Microwave/Imager
SST	Sea Surface Temperature
STNRY	Stationary
ST	Subtropical
STR	Subtropical Ridge
STY	Super Typhoon
TAPT	Typhoon Acceleration Prediction Technique
TC	Tropical Cyclone
TCFA	Tropical Cyclone Formation Alert
TCM-90	Tropical Cyclone Motion Mini-Field Experiment - 1992
TD	Tropical Depression
TDA	Typhoon Duty Assistant
TDO	Typhoon Duty Officer
TESS	Tactical Environmental Display System
TIROS	Television Infrared Observational Satellite
TOGA	Tropical Ocean Global
COARE	Atmosphere Coupled Ocean-Atmosphere Response Experiment
TOTL	Analog Technique based on all acceptable NWP basin analogs (straight and recurvers)
TOVS	TIROS Operational Vertical Sounder
TS	Tropical Storm
TUTT	Tropical Upper-Tropospheric Trough
TY	Typhoon
TYAN	Typhoon Analog (Program)
TYMNET	Time-Sharing Network: Commercial wide area network connecting micro- and main-frame computers
ULCC	Upper-Level Circulation Center
US	United States
USAF	United States Air Force
USN	United States Navy
VIS	Visual
WESTPAC	Western (North) Pacific
WMO	World Meteorological Organization
WRN or WRNG	Warning(s)
WS	Weather Squadron
X-track	Cross-track
XTRP	Extrapolation
Z	Zulu time (Greenwich Mean Time/Universal Coordinated Time)

APPENDIX D

PAST ANNUAL TROPICAL CYCLONE REPORTS

Copies of the past Annual Tropical Cyclone Reports for DOD agencies or contractors can be obtained through:

Defense Technical Information Center
ATTN:FDAC
Cameron Station
Alexandria, VA 22304-6145

Phone: (703)-274-7633
Fax: (703)-274-9307

Copies for non-DOD agencies or users can be obtained from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

Phone: (703)-487-4650
Fax: (703)-321-8547

Refer to the following numbers when ordering:

YEAR	ACQUISITION NUMBER	YEAR	ACQUISITION NUMBER	YEAR	ACQUISITION NUMBER
1959	AD 786147	1970	AD 785252	1981	AD A112002
1960	AD 786148	1971	AD 768333	1982	AD A124860
1961	AD 786149	1972	AD 768334	1983	AD A137836
1962	AD 786128	1973	AD 777093	1984	AD A153395
1963	AD 786208	1974	AD 010271	1985	AD A168284
1964	AD 786209	1975	AD A023601	1986	AD A184082
1965	AD 786210	1976	AD A038484	1987	AD A191883
1966	AD 785891	1977	AD A055512	1988	AD A207206
1967	AD 785344	1978	AD A070904	1989	AD A232469
1968	AD 785251	1979	AD A082071	1990	AD A239910
1969	AD 785178	1980	AD A094668	1991	AD A251952

APPENDIX E
DISTRIBUTION LIST

1 COPY

ACCU-WEATHER, INC.
AEROMET, INC.
ANALYSIS & PROCESSING CENTER, INDONESIA
ARNOLD ASSOCIATES
ASIAN DISASTER PREPAREDNESS CENTER, BANGKOK, THAILAND
BARRETT CONSULTING GROUP
BRUNEI SHELL PETROLEUM CO
CATHOLIC UNIVERSITY OF AMERICA
CAF WEATHER CENTRAL, TAIWAN
CENTRAL MET OBSERVATORY, BEIJING
CENTRAL METEOROLOGICAL OFFICE, SEOUL
CHULALONGKORN UNIVERSITY, BANGKOK
CHUNG CHENG INSTITUTE, TAIWAN
CITIES SERVICES OIL GAS CORP
CITY POLYTECHNIC OF HONG KONG
CIUDAD UNIVERSITARIA, MEXICO
CIVIL DEFENSE, BELAU
CIVIL DEFENSE, MAJURO
CIVIL DEFENSE, POHNPEI
CIVIL DEFENSE, SAIPAN
CIVIL DEFENSE, TRUK
CIVIL DEFENSE, YAP
CINCPACFLT
CNN
CNO
COLORADO STATE UNIVERSITY LIBRARY
COMMONWEALTH NORTHERN MARIANA ISLANDS
COMNAVMAR
COMNAVOCEANCOM
COMNAVSURFPAC
COMPATRECFOR
COMPHIBGRU ONE
COMSC
COMSEVENTHFLT
COMSPAWARSYSCOM
COMSUBGRU SEVEN
COMTHIRDFLT
COMUSNAVCENT
CONGRESSIONAL INFORMATION SERVICE, MD
DCA GUAM
DET 1,15WS WHEELER AFB, HI
DET 2, 51WS CAMP HUMPHREYS, KOREA
DISASTER CONTROL OFFICE, SAIPAN
EDMUNDS COLLEGE SOCIAL SCIENCE DEPT
FAIRECONRON ONE
FEDERAL EMERGENCY MANAGEMENT AGENCY, GUAM
FIJI METEOROLOGICAL SERVICE
GEOLOGICAL FLUID DYNAMICS LAB, PRINCETON, NJ
GEOLOGICAL SURVEY, GUAM
GEOPHYSICS LAB/LYS
GIFU METEOROLOGICAL OFFICE, JAPAN
GODDARD SPACE FLIGHT CENTER
GUAM COMMUNITY COLLEGE
GUAM POWER AUTHORITY
GUAM PUBLIC LIBRARY
HORIZON MARINE, INC
HQ AIR COMBAT COMMAND/DOW
HQ AWS
HQ AWS GROUP, ATC & WX WING JASDF, TOKYO
HQ US STRATCOM/J3615
HQ USAF/XOORZ
INDIAN INSTITUTE OF TROPICAL MET INSTITUO DE GEOFISICA, MEXICO
INTERNATIONAL CENTER FOR DISASTER MITIGATION, TOKYO
JAPAN AIR LINES
JCS ENV SERVICES DIV (J3(OES))
JET PROPULSION LAB, PASADENA
LEND FOUNDATION
LISD CAMP SPRINGS CENTER, MD
LOS ANGELES PUBLIC LIBRARY
MARATHON OIL CO, TX
MAURITIUS METEOROLOGICAL SERVICE
MASS INST OF TECH
MCAS FUTENMA
MCAS IWAKUNI
MCAS KANEOHE BAY, HI
MERCANTILE AND GENERAL REINSURANCE, AUSTRALIA
METEOROLOGICAL DEPARTMENT, PAKISTAN
METEOROLOGICAL OFFICE, BRACKNELL
METEOROLOGICAL SERVICE, MADAGASCAR
METEOROLOGICAL SERVICE, MAURITIUS
METEOROLOGICAL SERVICE, REUNION
MIL ASST ENV SCI (R & AT / E &LS)
MOBIL OIL GUAM, INC
MONASH UNIVERSITY, AUSTRALIA
NASA
NATIONAL CLIMATIC DATA CENTER LIBRARY, ASHEVILLE,NC
NATIONAL METEOROLOGICAL CENTER
NATIONAL METEOROLOGICAL LIBRARY, BRACKNELL, UK
NATIONAL RESOURCES INSTITUTE, INC, UK
NATIONAL TAIWAN UNIVERSITY
NATIONAL TECHNICAL INFORMATION SERVICE

NATIONAL WEATHER SERVICE, PAPUA NEW GUINEA
NAVAL CIVIL ENG LAB, PORT HUENEME, CA
NAVAL RESEARCH LAB
NAVEASTOCEANCEN NORFOLK
NAVHISTCEN
NAVOCEANCOMCEN ROTA
NAVOCEANCOMDET AGANA
NAVOCEANCOMDET ASHEVILLE
NAVOCEANCOMDET ATSUGI
NAVOCEANCOMDET KADENA
NAVOCEANCOMDET MISAWA
NAVOCEANCOMFACDET SASEBO
NAVOCEAN COMFAC JACKSONVILLE
NAVOCEANCOMFAC YOKOSUKA
NAVOCEANO
NAVAL POSTGRADUATE SCHOOL LIBRARY
NAVPOLAROCEANCEN SUITLAND
NEW ZEALAND INSURANCE
NEW ZEALAND MET SERVICE
NOAA/ACQUISITION SECTION, ROCKVILLE, MD
NOAA/AOML, HRD, MIAMI, FL
NOAA, ATMOS TURB AND DIFFUSION DIV, OAK RIDGE, TN
NOAA/HYDROMETEOROLOGY BR, SILVER SPRINGS, MD
NOAA/NESDIS, HONOLULU, HI
NOAA/PMEL, SEATTLE, WA
NOAA ENVIRONMENTAL RESEARCH LAB
NOAA LIBRARY, SEATTLE, WA
NOBEL DENTON
NRL ATMOSPHERIC DIRECTORATE
OCEANROUTES, INC, JOLIMENT, WEST AUSTRALIA
OCEANROUTES, INC, SINGAPORE
OCEANROUTES, INC, SUNNYVALE, CA
OCEANWEATHER, INC
OFFICE OF FEDERAL COORDINATOR MET
OFFICE OF NAVAL RESEARCH
OFFICE OF THE NAVAL DEPUTY, NOAA
OL-B, DET 1, 51WS SEOUL, KOREA
OL-B, DET 3 51WS CAMP CASEY, KOREA
PACIFIC STARS & STRIPES
PACNAVFACENGCOM
QUEENS COLLEGE, DEPT OF GEOLOGY
PENNSYLVANIA STATE UNIVERSITY
REUNION METEOROLOGICAL SERVICE
RUCH WEATHER SERVICE, INC
SAINT LOUIS UNIVERSITY
SAT APPL LAB, NOAA/NESDIS, WASHINGTON, DC
SHANGHAI TYPHOON INSTITUTE
SRI LANKA METEOROLOGICAL SOCIETY
SRI LIBRARY
TAO PROJECT OFFICE
TEXAS A & M UNIVERSITY
UNIV OF COLORADO, ATMOS SCIENCE
UNIVERSITY OF CHICAGO
UNIVERSITY OF GUAM, BIOLOGY DEPT
UNIVERSITY OF HAWAII LIBRARY
UNIVERSITY OF WASHINGTON
USAFETAC/DN
USCINCPAC
USCINCPAC REP GUAM
USCINCPAC REP FIJI
USNA (OCEANOGRAPHY DEPT/LIBRARY)
USS AMERICA (CV 66)
USS BLUE RIDGE (LCC 19)
USS BELLEAU WOOD (LHA 3)
USS CARL VINSON (CVN 70)
USS CONSTELLATION (CV 64)
USS EISENHOWER (CVN 69)
USS INDEPENDENCE (CV 62)
USS J. F. KENNEDY (CV 67)
USS KITTY HAWK (CV 63)
USS LINCOLN (CVN 72)
USS NEW ORLEANS (LPH 11)
USS NIMITZ (CVN 68)
USS PELELIU (LHA 5)
USS RANGER (CV 61)
USS SARATOGA (CV 60)
USS TARAWA (LHA 1)
USS TRIPOLI (LPH 10)
USS T. ROOSEVELT (CVN 71)
USS WASP (LHD 1)
VANUATU METEOROLOGICAL SERVICE
WORLD DATA CENTER B1, MOSCOW
AFGWC/WFM
3 AIR DIVISION HICKAM AFB, HI
8 0SS/DOW KUNSAN AB, KOREA
15 WS HICKAM AFB, HI
18 OSS/DOW KADENA AB, JAPAN
334 TCHTS/TTMV KEESLER AFB, MS
374 OSS/DOW YOKOTA AB, JAPAN
375 WS/OGWA SCOTT AFB, IL
432 OSS/DOW MISAWA AB, JAPAN
603 ACCS/WE OSAN AB, KOREA
633 OSS/DOW ANDERSEN AFB, GU
652 SPTG/DOW MCCLELLAN AFB, CA
815 WS (AFRES), KEESLER AFB, MS

<u>2 COPIES</u>
AFGWC/WFMP
AWS TECH LIBRARY
BUREAU OF METEOROLOGY, BRISBANE
BUREAU OF METEOROLOGY, DARWIN
BUREAU OF METEOROLOGY LIBRARIAN, MELBOURNE
BUREAU OF METEOROLOGY, PERTH

BUREAU OF PLANNING, GUAM
CIVIL DEFENSE, GUAM
DEFENSE TECHNICAL INFORMATION CENTER
DEPARTMENT OF COMMERCE
ECMWF, BERKSHIRE, UK
ESCAP LIBRARY, BANGKOK
FLENUMOCEANCEN MONTEREY
FLORIDA STATE UNIVERSITY
INSTITUTE OF PHYSICS, TAIWAN
MARINERS WEATHER LOG
MET RESEARCH INST LIBRARY, TOKYO
MICRONESIAN RESEARCH CENTER UOG, GUAM
NATIONAL CLIMATIC DATA CENTER
NATIONAL DATA BUOY CENTER
NATIONAL HURRICANE CENTER, MIAMI
NATIONAL WEATHER SERVICE, HONOLULU
NAVOCEANCOMDET DIEGO GARCIA
NAVOCEANCOMDET MISAWA
NAVWESTOCEANCEN PEARL HARBOR
NOAA GUAM
NORA 1570 DALLAS, TX
OKINAWA METEOROLOGY OBSERVATORY
SAT APPL LAB, NOAA/NESDIS, CAMP SPRINGS, MD
TYPHOON COMMITTEE SECRATARIAT, MANILA
UNIVERSITY OF PHILIPPINES
US ARMY, FORT SHAFTER
WORLD DATA CENTER A, NOAA
73 WEATHER GROUP, ROK AF

3 COPIES

BUREAU OF METEOROLOGY, DIRECTOR, MELBOURNE, AUSTRALLIA
CENTRAL WEATHER BUREAU, TAIWAN
INDIA METEOROLOGICAL DEPT
INOSHAC, DDGM (WF)
JAPAN METEOROLOGICAL AGENCY
KOREAN METEOROLOGY ADMINISTRATION
NAVPGSCOL DEPT OF METEOROLOGY
NOAA CORAL GABLES LIBRARY
PACAF/DOW
UNIVERSITY OF HAWAII, METEOROLOGY DEPT
WEATHER CENTRAL, CAF

4 COPIES

COLORADO STATE UNIVERSITY
METEOROLOGY DEPT, BANGKOK

5 COPIES

PAGASA WEATHER BUREAU, RP
R & D UNIT, NHC, MIAMI
ROYAL OBSERVATORY HONG KONG

6 COPIES

NRL WEST
NATIONAL WEATHER ASSOCIATION

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT AS IT APPEARS IN THE REPORT/ DISTRIBUTION UNLIMITED
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION NAVOCEANCOMCEN/JTWC 6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION NAVOCEANCOMCEN/JTWC
6c. ADDRESS (City, State and ZIP Code) COMNAVMAR, PSC 489, BOX 12 FPO AP 96536-0051	7b. ADDRESS (City, State and ZIP Code) COMNAVMAR, PSC 489, BOX 12 FPO AP 96536-0051
8a. NAME OF FUNDING/SPONSORING ORGANIZATION NAVOCEANCOMCEN/JTWC 8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (City, State and ZIP Code) COMNAVMAR, PSC 489, BOX 12 FPO AP 96536-0051	10. SOURCE OF FUNDING NOS. PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT NO.
11. TITLE (Include Security Classification) 1992 ANNUAL TROPICAL CYCLONE REPORT	
12. PERSONAL AUTHOR(S)	
13a. TYPE OF REPORT ANNUAL	13b. TIME COVERED FROM JAN 92 TO DEC 92
14. DATE OF REPORT (Yr., Mo., Day) 1992	15. PAGE COUNT 269 plus i thru vi
16. SUPPLEMENTARY NOTATION	

17. COSATI CODES		
FIELD	GROUP	SUB. GR.

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)

TROPICAL CYCLONES
TROPICAL STORMS
TROPICAL DEPRESSIONS
TYPHOONS/SUPER TYPHOONS
TROPICAL CYCLONE RESEARCH
METEOROLOGICAL SATELLITES

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

ANNUAL PUBLICATION SUMMARIZING TROPICAL CYCLONE ACTIVITY IN THE WESTERN NORTH PACIFIC, BAY OF BENGAL, ARABIAN SEA, WESTERN SOUTH PACIFIC AND SOUTH INDIAN OCEANS. A BEST TRACK IS PROVIDED FOR EACH SIGNIFICANT TROPICAL CYCLONE. A BRIEF NARRATIVE IS GIVEN FOR ALL TROPICAL CYCLONES IN THE WESTERN NORTH PACIFIC AND NORTH INDIAN OCEANS. ALL FIX DATA USED TO CONSTRUCT THE BEST TRACKS ARE PROVIDED, UPON REQUEST, ON DISKETTES. FORECAST VERIFICATION DATA AND STATISTICS FOR THE JOINT TYPHOON WARNING CENTER (JTWC) ARE SUBMITTED.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT UNCLASSIFIED/UNLIMITED XX SAME AS RPT. XX DTIC USERS ☐	21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED
22a. NAME OF RESPONSIBLE INDIVIDUAL FRANK H. WELLS	22b. TELEPHONE NUMBER (Include Area Code) (671)-344-5240 22c. OFFICE SYMBOL NOCC/JTWC

DD FORM 1473, 83 APR EDITION OF 1 JAN 73 IS OBSOLETE.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

BLOCK 18 (CONTINUED)

RADAR
AUTOMATIC METEOROLOGICAL OBSERVING STATIONS
SYNOPTIC DATA
TROPICAL CYCLONE INTENSITY
TROPICAL CYCLONE BEST TRACK DATA
TROPICAL CYCLONE FORECASTING
TROPICAL CYCLONE RECONNAISSANCE
TROPICAL CYCLONE STEERING MODELS
OBJECTIVE FORECASTING TECHNIQUES
TROPICAL CYCLONE FIX DATA
MICROWAVE IMAGERY
DRIFTING BUOYS